

SECTION 08520

ALUMINUM WINDOWS

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Extruded aluminum windows with [fixed] [and] [operating] sash, factory glazed, [with operating hardware and insect screens.]
- B. Perimeter sealant

1.2 SYSTEM DESCRIPTION

- A. Use windows with extruded aluminum sash sections, factory fabricated and factory glazed, vision glass, related flashings, anchorage and attachment devices.
- B. Use fixed [or describe operation] windows.

1.3 PERFORMANCE REQUIREMENTS

- A. Design and size components to withstand dead loads and live loads caused by positive and negative wind pressures acting normal to plane of wall, to a design pressure of 22 psf measured in accordance with ASTM E330.
- B. Limit member deflection to flexure limit of the glass, with full recovery of glazing materials.
- C. Accommodate, without damage to components or deterioration of seals, movement between window and perimeter framing, and deflection of header.
- D. Limit air infiltration through assembly to 0.10 cfm, measured at a reference differential pressure across assembly of 6.24 psf as measured in accordance with ASTM E283.
- E. No water leakage when measured in accordance with ASTM E331 with a test pressure of up to 12 psf.
- F. Drain water entering joints, condensation occurring in glazing channels, or migrating moisture occurring within system, to the exterior by a weep drainage network.
- G. Maintain continuous air barrier and vapor retarder throughout assembly, primarily in line with inside pane of glass and heel bead of glazing compound.

1.4 SUBMITTALS

- A. Submit the following in accordance with the requirements of Section 01300.
 - 1. Catalog data indicating component dimensions, anchorage and fasteners, glass, and internal drainage details.
 - 2. Shop drawings indicating opening dimensions, framed opening tolerances, affected related work, and installation requirements, if this information is not shown in the catalog data.
 - 3. Warranty for replacement of insulating glass in case of seal failure, or interpane dusting or misting.

1.5 QUALITY ASSURANCE

- A. Use products of a company that specializes in the manufacture of the products specified in this Section.
- B. Use an installer that has successfully completed at least 10 projects of the size and scope of this project.

1.6 ENVIRONMENTAL REQUIREMENTS

- A. Do not install sealants when the temperature is less than the manufacturer's recommended minimum temperature for installation and curing.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Alenco - Series []
- B. Custom Windows - Series []
- C. Efco Corporation - Series []

2.2 MATERIALS

- A. Use extruded aluminum conforming to ASTM 6063 T5.
- B. Use sheet aluminum conforming to ASTM B209.
- C. Use stainless steel or galvanized steel fasteners.

2.3 COMPONENTS

- A. Use frame materials with nominal dimensions of 2 inch wide by 3 1/2 inch deep, thermally broken, with interior section insulated from exterior; snap-on glazing stops.
- [B. If reinforced mullions are required, use standard thermally broken frame with internal steel member reinforcement.]
- [C. Provide insect screens with frames made of formed aluminum with finish to match window frames, and FS L-S-125 woven plastic mesh screen material with 14/18 mesh size.]
- [D. Provide operable sash weatherstripping of permanently resilient material, profiled to effect weather seal.]

2.4 GLASS AND GLAZING MATERIALS

- A. Use double pane insulating glass, [1/2 inch thick] [1 inch thick] as specified in Section 08800.
- B. Use glazing materials specified in Section 08800.
- C. Use sealant specified in Section 07900.

2.5 FABRICATION

- A. Fabricate components with minimum clearance and shim spacing around perimeter of assembly, yet enabling installation and dynamic movement of perimeter seal.
- B. Accurately fit and secure joints and corners. Make joints flush, hairline and weatherproof.
- C. Prepare components to receive anchor devices. Fabricate anchors.
- D. Install fasteners and attachments to be concealed from view.
- [E. Prepare components with internal reinforcement for operating hardware.]
- F. Provide internal drainage of glazing spaces to exterior through channels and weepholes.
- [G. Install weatherstrip at operable units.]
- [H. Fabricate sills from 24 gage aluminum sheet, anodized to match window frames.]
- I. Factory glaze window units.

2.6 FINISHES

- A. For aluminum window [and screen] frames use Class 1 dark bronze anodize finish.
- [B. Enamel operator and exposed hardware to match dark bronze anodize color.]
- C. Apply 1 coat of bituminous paint to concealed aluminum surfaces in contact with treated wood, cementitious, or other dissimilar materials.

PART 3 EXECUTION

3.1 INSPECTION

- A. Verify dimensions, tolerances, and methods of attachment with other Work.
- B. Verify wall openings and adjoining air and vapor seal materials are ready to receive Work of this Section.

3.2 INSTALLATION

- A. Install window frames in accordance with approved shop drawings and manufacturer's installation instructions.
- B. Install window assembly in accordance with AAMA 101.
- C. Attach window frame and shims to perimeter opening to accommodate construction tolerances and other irregularities.
- D. Align window plumb and level, free of warp or twist. Maintain dimensional tolerances and alignment with adjacent work.
- [E. Install sill.]
- F. Provide thermal isolation where components penetrate or disrupt building insulation.
- G. Coordinate attachment and seal of perimeter air and vapor barrier materials.
- [H. Install operating hardware.]

- I. Install perimeter sealant in accordance with Section 07900.

[3.3 ADJUSTING

- A. Adjust hardware for smooth operation and secure, weathertight closure.]

3.4 CLEANING

- A. Remove protective material from frame members.
- B. Wash surfaces with a solution of mild detergent in warm water, applied with soft, clean wiping cloths. Take care to remove dirt from corners. Wipe surfaces clean and dry.

3.5 PROTECTION OF FINISHED WORK

- A. Protect finished work from damage.

END OF SECTION